

We claim:

- Sub/Add A1
1. A method of mapping a volumetric electrical potential distribution of a heart chamber arising from electrical activation in a myocardium comprising the steps of:
 - a) positioning an electrode array within the heart chamber;
 - b) determining heart chamber volume and shape;
 - c) computing the position of said array within said heart chamber;
 - d) measuring electrical potentials on said array;
 - e) computing the three-dimensional volumetric electrical field distribution of said heart chamber volume from a spherical harmonic series expression containing said measured electrical potentials, and said array position; and
 - f) displaying said volumetric electrical field distribution.
 2. The method of claim 1, wherein step f) further comprises displaying the volumetric electrical field distribution on over a display of the heart chamber volume and size.
 3. The method of claim 2, further comprising
 - g) displaying the position of the array within said heart chamber on the display generated in step f).

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